

inspector looks at the hierarchy of pest management practices in a facility. As it turns out, only two widely-used classes of additives exhibit behavior that is of direct concern for culinary steam systems in organic handling facilities. The most important chemical characteristic for purposes of organic integrity is not the toxicity per se, but whether or not the compound enters the vapor phase and is transmitted with the steam. This is determined by a property known as the distribution ratio, which is a temperature-dependent expression of how much of the compound resides in the vapor phase (steam) versus the liquid phase (hot water). Compounds with a distribution ratio greater than zero are said to be volatile. A wide range exists, however, with some boiler chemicals having ratios as high as 10 (highly volatile), while others have ratios approaching zero (low volatility). Below, we highlight the commonly-used classes of boiler additives in terms of the three most common issue(s) they are intended to address.

**Dissolved Oxygen:** One of the most troublesome components in boiler systems is dissolved oxygen (DO). When boiler water is heated, DO becomes increasingly reactive and can cause severe corrosion of metal parts throughout the system if not controlled. It is very difficult to completely prevent DO from entering the boiler system: some invariably gets past the de-aerator (if present), while minute leaks at steam fittings and exposure to air in the condensate system allow additional oxygen to enter the system, where it is often returned to the boiler along with the condensate.

Boiler additives are designed to address this issue in two different ways. The first is by chemically eliminating the oxygen through the use of inorganic compounds known as **oxygen scavengers** (sometimes called reducing agents), which readily accept

oxygen into their chemical structure by transforming into soluble salts. Sodium sulfite (or sulfide, or sulfonate) is the most widely used oxygen scavenger because it is cheap, effective, and of comparatively low toxicity (though not without hazard). As a rule, oxygen scavengers do not enter the vapor phase, and therefore pose no risk of being transmitted to products via the steam.

The other type of additive used to manage DO involves a completely different approach, namely creating a film on the surfaces of steam lines and other equipment. Such **filming amines** are formulated with emulsifiers and dispersants to form a protective barrier that inhibits corrosion from both oxygen and carbonic acid (our next topic). By design, they are highly volatile in order to carry over in the steam and effectively coat steam lines, and they are most often found in older facilities, which tend to have less modern boiler systems with more corrosion-prone components. Currently, octadecylamine is the only FDA-approved filming amine; it is limited to 3 ppm in steam, and prohibited in dairy plants. In organic handling situations, it is allowed only in steam used for packaging

sterilization.

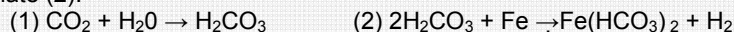
**Carbonic Acid:** The other major cause of corrosion in boiler feedwater is carbon dioxide (CO<sub>2</sub>), which readily dissolves in water to form carbonic acid. This reaction accelerates at higher temperatures, such as those found in a boiler system, resulting in enhanced rates of corrosion. The primary source of CO<sub>2</sub> in feedwater is carbonate minerals, such as calcium carbonate (limestone) and calcium-magnesium carbonate (dolomite), both of which occur abundantly in many aquifers and are major components of hardness. These minerals are readily soluble in groundwater and produce both carbonate and bicarbonate, which are the key components of alkalinity and the main chemical precursors to CO<sub>2</sub> and carbonic acid. While mechanical de-aeration does remove most dissolved CO<sub>2</sub>, it has no effect on carbonate or bicarbonate; conditioning the feedwater via ion exchange (e.g., softening or reverse osmosis) is effective at reducing alkalinity, however.

Boiler additives employed to combat carbonic acid attack have two primary modes of operation. As their name implies, [see **Boiler**, p 14]

### Chemistry 101: Boiler System Corrosion and Treatment

Dissolved oxygen causes steel to corrode into iron oxides and hydroxides (rust) according to the following 3 equations: (1)  $\text{Fe} + 2\text{H}_2\text{O} \rightarrow \text{Fe}(\text{OH})_2 + \text{H}_2$   
(2)  $\text{Fe}(\text{OH})_2 \rightarrow \text{Fe}^{++} + 2\text{OH}^- \rightarrow \text{Fe}_2\text{O}_3 + 3\text{H}_2\text{O}$  (3)  $4\text{Fe} + 6\text{H}_2\text{O} + 3\text{O}_2 \rightarrow \text{Fe}(\text{OH})_3$

Another mechanism of corrosion results when carbon dioxide dissolves in water to form carbonic acid (1). Carbonic acid then reacts with steel to form ferrous bicarbonate (2):



Boiler additives used to treat corrosion work by interrupting these chemical processes. For example, oxygen scavengers, such as sodium sulfite, accept oxygen into their structure, thereby forming non-scaling sodium sulfate:  $2\text{Na}_2\text{SO}_3 + \text{O}_2 \rightarrow 2\text{Na}_2\text{SO}_4$

Neutralizing and filming amines both neutralize acid (H<sup>+</sup>) created by the solution of carbon dioxide in the condensate:  $\text{R-NH}_2 + \text{H}_2\text{CO}_3 \rightarrow \text{R-NH}_3^+ + \text{HCO}_3^-$   
The former are a systemic treatment that creates a condensate pH of 8.5 to 9.0, whereas the latter form a protective barrier that coats susceptible surfaces.

For a more comprehensive chemical treatment of this topic (highly recommended), see **Mechanisms of Boiler and Steam Condensate Corrosion**, posted on the IOIA website.

## Boiler, from page 13

**neutralizing amines** are high-pH chemicals that react with carbonic acid to neutralize acidity and maintain a strongly alkaline pH in the boiler system. Morpholine, cyclohexylamine, diethylamino ethanol, and hydrazine are all in this class, and all are readily transmitted in the vapor phase. Together with the aforementioned octadecylamine, they comprise the so-called “volatile amines” inspectors should be on the lookout for. The second mode of action against acid attack uses a filming agent to coat susceptible surfaces with a protective barrier. The **filming amine** octadecylamine, and acrylamides are the primary additives of this type. The latter belong to the class of additives broadly referred to as **polymers** (resins), which are not volatile except for trisodium nitrilotriacetate, a rarely used amine substitute.

**Mineral Deposits:** Mineral deposits wreak havoc by reducing boiler efficiency, raising energy costs, and coating the surfaces or plugging orifices of processing equipment (with attendant functional and sanitation challenges). Referred to generically as “scale” or “rust”, these deposits include several kinds of minerals with different sources and chemical properties. Calcium-magnesium carbonates typically form in systems fed by groundwater, which often comes from limestone- and dolomite-bearing formations. Iron oxides (rust) can occur both as a result of corrosion, which liberates iron from steel surfaces, and naturally: some groundwater sources are high in dissolved (reduced) iron, which becomes insoluble in the presence of oxygen inside the boiler and precipitates as oxides or hydroxides. Silicates are less common but sometimes occur in acidic feedwater, and subsequently become unstable and precipitate as scale in the alkaline environment inside a boiler system.

Feedwater conditioning methods available to reduce the mineral content include ion exchange, and clarifying with quick lime (for calcium and magnesium) or soda ash (for silicates). A variety of additives are also used, most of which react with the dissolved phase of the mineral to either keep it in solution or to cause it to precipitate out in a soft and easily removable form.

**Phosphates**, for example (mono-, di-, and tri-sodium phosphate; sodium polyphosphate) react with calcium and magnesium to form soft rock phosphate, while **chelating agents** (ethylenediamine tetra-acetic acid, or EDTA, is a common example) enhance the solubility of minerals and prevent them from precipitating on surfaces. **Polymers** work similarly to chelating agents and are among the best methods for controlling both iron and silicate deposits. None of these three classes of additives are volatile, except for the polymer, trisodium nitrilotriacetate.

### Tips for Effective Boiler Additive Inspections

The first question that must be answered is whether or not there is direct contact between boiler steam and any product or food-contact surface, including during sanitation. The answer to this question should be clear from the Organic Handling Plan, but it must be verified at the inspection, both by operator interview and by direct observation of the process flow. We have encountered situations where the OHP is wrong! Pay particular attention to any schematic facility diagrams and flow charts. Be clear about whether steam-based processes use indirect heating (e.g., plate pasteurizer, double-wall kettle, tube-in-shell) or direct heating (e.g., sparging, capping-lidding operations, blanching, peeling, and extrusion). Beyond these common processes, direct steam may be used in a number of less obvious places: scalding (chicken processing), tempering (grain processing), steam

### A Simple Decision Tree for Inspecting Boiler Systems:

- 1) Is a boiler system present at the facility? *If the answer to any of the first three questions is “NO”, there are no compliance issues related to boiler additives. If it is “YES”, continue on.*
- 2) Does steam have direct contact with ingredients, products, packaging, or food-contact surfaces at any point during processing or sanitation?
- 3) What boiler additives are used, and are any of them volatile?
- 4) Does the operation utilize an “integrated boiler management” program in which alternatives to volatile boiler additives (e.g., feedwater conditioning, excellent system maintenance, and non-volatile additives) are or have been tried first? *If yes, continue to #5. If no, or the boiler program is not documented, a minor noncompliance may exist. Continue to #5.*
- 5) Is the steam used in organic processing limited to packaging sterilization? *If yes, go to question #6. If no, jump to question #7.*
- 6) Are cyclohexylamine, diethylaminoethanol, and/or octadecylamine the only volatile additives in use, and is the concentration measured in the steam within FDA limits? *If yes, the operation complies with the NOP. If no, go to the next question.*
- 7) Are measures in place to prevent contact of prohibited boiler additives with organic food, and are they documented to be 100% effective? *If the answer to either of these is no, a major noncompliance exists.*

barriers in pasteurizers, and sterilization of transfer carts and other ancillary vessels are examples.

Second, if direct contact does occur, then you must identify the chemical names of all boiler additives used, not just the trade names. This can’t be emphasized enough! This information should also be clear from the OHP, but we have seen many cases where the OHP lists only the trade name

## Regulation of Volatile Boiler Additives: FDA vs NOP

The seven volatile boiler additives currently regulated by the FDA for use in food processing plants are cyclohexylamine, octadecyclamine, diethylamino ethanol, hydrazine, morpholine, ammonium hydroxide, and trisodium nitrilotriacetate. In practice, ammonium hydroxide is seldom if ever used in food plants because it can create odor issues. In all cases, the maximum concentration allowed in culinary steam is regulated. The first five are "volatile amines", the last two are not. This is why keying on the phrases "amine", "amino", or just plain "-ine" is helpful, but not infallible, for identifying additives that transmit through the steam. The first three are allowed at 205.605 for package sterilization only (as limited by FDA); otherwise, none are allowed to have any contact with organic food. To learn how and which boiler additives are regulated by the FDA, visit 21 CFR 173.310.

(e.g., "Marathon 84"), and if you don't obtain the chemical name, you would have no way of recognizing this additive as morpholine (prohibited). Moreover, the boiler additives used at a given facility can and do change over time, and those changes may not be communicated between the boiler service staff (usually an outside company) and the individual who updates the OHP. Thus, don't rely solely on the OHP: always visually observe the boiler room and compare both the trade and chemical names of the additives listed on the containers to the OHP and any MSDS provided with it. Note that MSDS for boiler additives must be maintained on site.

Third, there is a strong case to be made that an organic handler should be using an "integrated boiler management" program to reduce or eliminate the need for volatile additives. Look for evidence that the facility has a viable boiler system maintenance program that includes regular feedwater and condensate

testing and inspection of system components. How often are water-quality tests performed on the plant's water supply, and are the results consistent with the boiler treatments used? Is there evidence that alternatives to volatile additives are or have been attempted, such as appropriate feedwater conditioning methods and non-volatile additives? Oxygen scavengers such as sodium sulfite, and acrylamides such as 2-acrylamido-2-methyl-propane-sulfonic acid copolymer are often excellent alternatives to volatile additives.

Some operations that use volatile boiler additives in culinary steam may shut off the additive feed at some predetermined time before organic handling begins in an effort to prevent contact with organic products. This raises a host of difficult questions. How is the appropriate shut-off interval determined, and are the results repeatable (as in any good science experiment)? Boiler systems are complex systems with many variables that affect the "half life" of additives. For example, was the condensate test done on a Monday, after the boiler was off or running on low power for the weekend? Was more than one test performed? Perhaps most importantly, what is the sensitivity of the test method that was used? Testing of condensate for volatile additives is a fairly simple operation using colorimetric kits from familiar suppliers (e.g., Hach, Ecolab), but just like quat test kits, the sensitivity varies from kit to kit (or it may be geared to FDA maximum limits) and may not definitively indicate "zero" residue is present in the condensate. If this is the situation, you must ask a lot of questions and request documentation. In some cases it may not be possible to conclusively verify that shutting off the additives is a scientifically sound approach to compliance. Such problematic operations may be better off using a

portable steam generator during organic handling, an elegant and comparatively inexpensive solution that requires no additives.

Finally, keep in mind that, despite some claims to the contrary, none of the steam traps and filters in use today in processing plants are capable of removing volatile boiler additives. This includes activated carbon filters, culinary filters, condensate traps, and any other kind of filter!

## Annual Report, from p 19

Eric Feutz, Treasurer, is the senior member of the BOD and ably chairs the Finance Committee. During 2011, he convened the Finance Committee to plan the audit and draft the 2012 budget. The BOD met in person at the AGM, 11 times via conference calls, and at the 3-day retreat. BOD minute highlights are published in each newsletter. Full minutes are available on the "Inspectors Only" section of the website.

### Staff:

Margaret Scoles continues as Executive Director. IOIA benefits from a staff of highly skilled and dedicated individuals. In addition to adding the Training Services Director full-time, IOIA transitioned from a part-time to full-time Office Manager.

- ▶ Danalynne Miller, Office Manager (thank you to Renee Higgins, who left in 2011 as the position was expanded)
- ▶ Jonda Crosby, Training Services Director
- ▶ Sacha Draine, International Training Manager (.6 FTE)
- ▶ Kathy Bowers, U.S. Training Services (.6 FTE)
- ▶ Lynell Denson, Administrative Assistant (.4 FTE)
- ▶ Diane Cooner is contract Newsletter Editor, Website Manager, and moderator of the IOIA Forums.

**Your help as volunteers and committee members is necessary and greatly appreciated!**

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## Food Justice Certified: Domestic Fair Trade Label from the Agricultural Justice Project

By Elizabeth Henderson

Fair prices to farmers that cover their costs of production, the protection of children from hazardous farm work, and living wages plus respectful treatment for all food system workers are the core guarantees of the new **Food Justice Certified** label. After a dozen years in development, the **Agricultural Justice Project** is launching this program across North America.

The Farmer Direct Coop, a marketing cooperative of 70 grain farms in Saskatchewan, is the first group of farmers to earn the Food Justice label. Hoch Orchards, Featherstone Farm, the Bluff Country Coop, Gathering Together Farm, and Spring Hill Farm (two of the Organically Grown Company's Ladybug brand farms), and the Midwest Organic Services Association in the Upper Mid-West have also met the high bar for AJP certification.

In announcing the official launch of this domestic fair trade program, Michael Sligh, of the Agricultural Justice Project Management Committee, declared, "Just as the certified organic label took years and input from thousands of individuals to become the gold standard for how to grow and produce our food, the creation of **Food Justice Certified** has involved a broad base of committed individuals and groups from all sectors of the food system. The process has been transparent and rigorous and aims to set a high bar for integrity and fair relations among the people who grow, process and sell our food. A truly digestible food product is one in which farmers, farm workers and those who sell the fruits of this labor all work collaboratively."

The Food Justice label is available both to farms and other food businesses from seed to table. It can be used as an additional claim along with certified organic or as a stand-alone label for advanced integrated pest management farms. In New York State over the next year, farms will be piloting a pledge version for small-scale direct market farms with limited hired labor.

Currently, Quality Certification Services ([qcsinfo.org](http://qcsinfo.org)), Midwest Organic Services Association ([mosa.org](http://mosa.org)) and Oregon Tilth ([otco.org](http://otco.org)) offer AJP Certification. This label is distinguished by a verification process that includes the participation of farm worker organizations. CATA/Farmworker Support Committee ([catafarmworkers.org](http://catafarmworkers.org)), Centro Campesino ([centrocampesino.net](http://centrocampesino.net)), the Farm workers Association of Florida ([floridafarmworkers.org](http://floridafarmworkers.org)), Community to Community ([foodjustice.org](http://foodjustice.org)), Pioneros et Campesinos Unidos del Noroeste ([pcun.org](http://pcun.org)) and the Agriculture Workers Alliance in Canada ([awa-ata.ca](http://awa-ata.ca)) have been through trainings to provide the worker inspection component of this certification. In cooperation with IOIA, AJP will be offering training to inspectors who wish to qualify to verify this new certification.

**There will be an AJP training in Santa Cruz, California, March 27-29, 2012. If you would like to register to attend and for information and questions about the standards, trainings and technical assistance, please contact Sally Lee at the Rural Advancement Foundation International. Email: [agjusticeproject@gmail.com](mailto:agjusticeproject@gmail.com), 919-623-9516.**

The **Food Justice Certified** label rewards honest and open relationships throughout the food chain. Its third party verified seal certifies that the highest standards of equity and

fairness have been met on farms, in food manufacturing and in stores. The standards cover:

- Farmers and all food system workers' rights to freedom of association
- Fair wages and benefits for workers
- Fair and equitable contracts for farmers and buyers
- Fair pricing for farmers
- Clear conflict resolution policies for farmers, workers and buyers
- The rights of indigenous peoples
- Workplace health and safety and decent farmworker housing
- High quality training for farm interns and apprentices
- The rights and protection of children on farms
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To read the full standards, go to [www.agriculturaljusticeproject.org](http://www.agriculturaljusticeproject.org).

The founders of the Agricultural Justice Project who also serve on the AJP Management Committee include Elizabeth Henderson from Peacework Farm and the Northeast Organic Farming Association, Marty Mesh from Florida Organic Growers and Quality Certification Services, Michael Sligh from the Rural Advancement Foundation International-USA, and Richard Mandelbaum from CATA/Farmworker Support Committee. The AJP Advisory Council guides the Management Committee; it includes farmers and farmer advocates, farmworkers and farmworker advocates, food co-op managers, organic certifiers, and other food system business representatives.

Internationally, fairness is regarded as an integral part of organic agriculture. The IFOAM Principle of Fairness states: "Fairness is characterized by equity, respect, justice and stewardship [See **Justice**, page 22]

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# IOIA BOD Meeting & Retreat Minutes

New Lebanon, NY - November 18-19-20, 2011

A regular meeting of the BOD was held in person. **Attendance:** Jennie Clifford, Silke Fuchshofen, Ib Hagsten, H  l  ne Bouvier, Eric Feutz, Debra Bunn, Margaret Scoles – Executive Director: Absent: Michelle Sandy. Acting Chair & Timekeeper: Jennie Clifford, Acting Vice-Chair: Silke Fuchshofen, Note taking: Margaret Scoles, H  l  ne Bouvier minutes, Eric Feutz financials.

Meeting convened on November 18 at 7:38 AM. Ib Hagsten moved to recess for BOD retreat work. Recess November 18, 2011 10:45 AM, reconvened November 20, 2011 7:13 AM.

Discussion over “Championing projects” produced the following **Action Points:** Jennie Clifford and H  l  ne Bouvier will draft an ED Performance Evaluation and submit to BOD for approval before December meeting. Ib Hagsten and H  l  ne Bouvier will revise Orientation package and policy on meet and greet of new BOD. Debra Bunn and H  l  ne Bouvier will create BOD job descriptions with responsibilities before March 2012 AGM.

**Audit Policy: Action Point:** Eric Feutz will advocate to Finance Committee for a recommendation on Audit Policy, detailing timeline and scope of audit, review of accounting procedures and annual financial review before March 2012 AGM.

**Membership Committee:** Update received on Membership Committee’s work with regard to strengthening membership base, implementation of member recruitment campaign and promotion of membership benefits. Nominations Committee is currently working on nominations and number of candidates.

**Bylaws Proposals: Action Point:** Silke Fuchshofen will contact bylaws Committee for recommendation to revise by-laws per discussion of Staggered BOD terms - 1 and/or 3 year terms. Currently 5 BOD elected every other year and 2 BOD elected every other year, starting in 2011 when BOD was expanded from 7 to 5.

**Grant Writer:** Discussed grant writers/seekers and payment structures.

**Finance Committee** to meet in December. Preliminary budget will be looked at. Action Point: Eric Feutz will engage Finance Committee for direction re annual finance for line items, such as wage increases and bonuses.

**Treasurer Report:** BOD reviewed January through September 2011 Revenue & Expense Budget vs. Actual, Balance Sheet as of September 30, 2011 and Treasurer’s report dated November 20, 2011. Ib Hagsten motioned to approve Treasurer’s report with one correction, H  l  ne Bouvier seconded. All in favour. Motion carried.

## IOIA BOD Conference Call - December 13, 2011

The meeting convened at 9:23 a.m. EST immediately following an 8:30 a.m. EST executive meeting concerning the Executive Director’s compensation and the Executive Director and staff’s bonuses. **Attendance:** Jennie Clifford, Acting Chair; Silke Fuchshofen, Timekeeper and simultaneous recorder of action points in Google Docs; Ib Hagsten, Minutes, assisted by Patricia Hagsten as Note taker; Eric Feutz, Financials; Debra Bunn and Margaret Scoles, Executive Director. Absent: Michelle Sandy and H  l  ne Bouvier.

**Budget:** Eric Feutz presented a preliminary 2012 budget showing a \$4,600 surplus; however, following the Executive Meeting decisions plus discussion of the line items, adjustments will be made using year-end actual figures and a revised budget will be presented at the January BOD meeting. Line item added for grants/special projects was discussed, stays as presented. Eric Feutz, in conjunction with the Finance Committee, is to develop an audit procedure proposal that will meet the intent of IOIA Policy Manual yet be within the budget.

**BOD to hold the mini day-long BOD retreat** the day prior to Advanced Training on Monday, February 27. BOD will arrive on Sunday, February 26th and not to leave until late in the day on Friday, March 2nd.

**Scholarship:** Deb Bunn moved and Ib Hagsten seconded a motion to approve the Scholarship Committee’s recommendation to give two Rutherford Awards for 2012. Motion unanimously approved. [see **Minutes**, page 22]

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# IOIA Annual Report 2011 – Executive Summary

Prepared by Jennifer Clifford, IOIA Board Vice-Chair/Acting Chair, and Margaret Scoles, IOIA Executive Director

*Note: The complete Annual Report is posted on the IOIA website ([www.ioia.net](http://www.ioia.net)) and copies will be available at the Annual Meeting on March 1.*

## Key Activities and Alliances:

- ▶ Celebrated the 20<sup>th</sup> anniversary of IOIA in Tampa, Florida. Fred Kirschenmann, the speaker at IOIA's first annual meeting, returned as keynote speaker. Sweetwater Farm, founded by Rick Martinez, early IOIA BOD member, hosted the biggest party in IOIA history, including a highly successful benefit auction.
- ▶ Significantly increased inspector membership. IOIA's 240 inspector members represent a 6.7% increase during 2011 and the highest number in history.
- ▶ Added the position of Training Services Director to expand the IOIA Training Institute, bringing Jonda Crosby on as full-time senior staff. She brings a lifetime of experience in sustainable agriculture and agricultural education.
- ▶ Added the position of Technical Editor, Tony Fleming, to write or edit technical articles useful to inspectors for each issue of the IOIA newsletter.
- ▶ Successfully won a bid for and completed a contract with the USDA to propose criteria, training content, training approaches, and licensing approaches for organic inspectors and reviewers. This ambitious project was accomplished by a hard-working team, shared management, and Monique Scholz, lead writer and IOIA member from Quebec.
- ▶ Supported the lawsuit of Organic Seed Growers and Trade Association (OSGATA) et al vs. Monsanto. IOIA is one of 12 amici brief signatories. BOD and the ED participated in calls over several months as the suit developed.
- ▶ Commented to the US National Organic Standards Board on issues of unannounced inspections, inspector criteria, and residue testing.
- ▶ Nearly doubled webinar offerings. IOIA delivered Organic Aquaculture training via webinar to a classroom in Hong Kong. Other webinars included NOP Pasture Rule, two customized NOP standards trainings for certifiers, and an audit balance webinar. Pre-course webinars are standard curriculum content for all courses in the US.
- ▶ Entered into partnership with the Organic Materials Review Institute to provide the first of three webinars (Crop Input Materials) in a series, and planned the second (Livestock Input Materials), scheduled for delivery in March and throughout 2012 every quarter as requested. Processing Materials are to be developed next. These are the first of the ("200 level") trainings, identified as topics not covered comprehensively in the basic courses but still essential for all inspectors. Inputs webinars for the Canadian Organic Standards Permitted Substance List are under discussion.
- ▶ Continued an ongoing alliance with FoodChain Global Advisors to provide non-GMO product verification training.
- ▶ Hosted quarterly Certifier-Inspector Dialogue conference calls. The ongoing dialogue is invaluable in shaping the IOIA training program and addressing inspector issues and member concerns.
- ▶ Sponsored a booth at the World Organic Fair with JOIA and KOIA and a workshop at the Organic World Congress, and participated in the IFOAM General Assembly. The ED traveled to Korea for these events. Sacha Draine, IOIA International Training Manager, and the ED traveled together to attend BioFach in Germany. Board Chair, Michelle Sandy, attended BioFach China.
- ▶ Continued to participate on the Canadian General Standards Board's Organic Technical Committee. Kelly Monaghan, IOIA's representative, is OTC Chair.
- ▶ Provided in-house training over two days on the NOP Standards at the USDA office in Washington, DC.
- ▶ Continued sponsorship of the Guelph Organic Conference in Canada and provided advanced training in conjunction with the 2011 conference, largely through the efforts of Canadian Committee Chair, Bill Barkley, and Membership Committee Chair, Kelly Monaghan. This training sparked the concept to foster single-day organic training events for inspectors in conjunction with other major organic events.
- ▶ Participated in Natural Products Expo East and Expo West in the U.S.
- ▶ Continued support of OTA, IFOAM, OMRI, COG, Green America, and MT Nonprofit Association through memberships and subscriptions.
- ▶ Joined the Accredited Certifiers Association as a supporting member.
- ▶ Continued quarterly newsletter, annual Membership Directory, IOIA Forums (English, Spanish language, Canadian members), member discounts.
- ▶ Sponsored social networking for inspectors (i.e. the Guelph Wine & Cheese).

## Trainings:

IOIA training continues to increase in value and global recognition. IOIA again saw another increase in both the numbers of events and participants over the previous year. The webinar format continues to increase access to IOIA training with webinars provided for audiences as far away as Australia and Hong Kong. IOIA sponsored training events in Manitoba, Ontario, Utah, Idaho, Florida, Vermont, New Jersey, Minnesota, California, Jamaica, Australia, Korea, Ecuador, Hong

Kong, Japan, Nicaragua, Peru, and Costa Rica, usually with the support of regional co-sponsors. International livestock and processing trainings and more participation in advanced training were significant areas of activity. Plans are underway to quadruple the number of webinar offerings during 2012. With both the USA and Canada on the brink of adopting national regulations for organic aquaculture, IOIA is gearing up to meet the need for more aquaculture training.

<b>IOIA Trainings in 2011</b>		
<b>Type of Course</b>	<b>Number of Events</b>	<b>Number of participants</b>
Basic Crop	12	227
Livestock	3	49
Basic Processing	6	77
Advanced	5	92
NOP Standards Workshops	2	35
Aquaculture	1	30
Pasture Webinars	1	22
IOIA – OMRI Webinars	3	55
Other Webinars	2	13
Other	<u>1</u>	<u>27</u>
<b>Total</b>	<b>36</b>	<b>627</b>

**Finances:**

IOIA maintains a solid financial position and once again, did not need to dip into cash reserves. The USDA contract was a welcome unbudgeted and unexpected source of income. A modest increase in inspector dues, coupled by an increase in inspector membership also helped increase income.

IOIA reports to the membership on a cash basis. At the end of 2011, IOIA had accounts receivable of \$64,000, most of which was received in January 2012. These receivables created a temporary shortfall in the Cash basis financial report at year-end.

A full audit of the IOIA finances for 2010 was due to occur in 2011, as per BOD policy. The audit is still in progress; results will be reported in the 2012 newsletter.

**Committees** -- Full Committee Reports will be available at the Annual Meeting. A hearty thank you to outgoing Kelly Monaghan, who chaired the Membership Committee for the past 4 years.

**Board of Directors in 2011:**

With the 2011 AGM, the BOD was expanded for the first time from five to seven full members. In the past, IOIA had maintained boards of five or seven, always with two alternates. A bylaws ballot in 2010 eliminated the position of alternates. The 2011 AGM election created a BOD with four new BOD members out of seven. This majority of new members was a major factor in deciding to meet in-person for a 3-day retreat in upstate New York in November. This was the first in-person BOD retreat outside the AGM since 2007.

Retiring Board members: Bob Durst (4 years and Chair for the past 3 years) deserves a huge thanks for his work. Also, thanks are due to David Konrad (4 years), Julio Perez and Bob Howe (both 2 years as Alternates), and Michelle Sandy (nearly 2 years). Thank you Michelle, who served as BOD Chair for most of the past year. She resigned from the BOD in December.

Soon-to-retire Board member: Jennie Clifford (2 years)

New Board members in 2011: Debra Bunn, Silke Fuchshofen, Ib Hagsten, Hélène Bouvier.

**Balance Sheet (Cash Basis)  
As of December 31, 2011  
Current and Previous Year**

	<b>Dec 31, 11</b>	<b>Dec 31, 10</b>
<b>ASSETS</b>		
<b>Current Assets</b>		
Checking/Savings		
<b>Total Checking/Savings</b>	160,238.72	191,204.42
<b>Total Accounts Receivable</b>	-419.63	-100.45
<b>Total Other Current Assets</b>	9,191.42	4,703.30
<b>Total Current Assets</b>	169,010.51	195,807.27
<b>Fixed Assets</b>		
<b>Total Building</b>	35,000.00	35,000.00
<b>Total Fixed Assets</b>	35,000.00	35,000.00
<b>Other Assets</b>		
Accumulated Depreciation	-1,540.92	-1,540.92
<b>Total Other Assets</b>	-1,540.92	-1,540.92
<b>TOTAL ASSETS</b>	<b>202,469.59</b>	<b>229,266.35</b>
 <b>LIABILITIES &amp; EQUITY</b>		
<b>Liabilities</b>		
<b>Current Liabilities</b>		
Health Reimbursement Arrgmt	-100.00	0.00
<b>Total Current Liabilities</b>	100.00	0.00
<b>Total Liabilities</b>	100.00	0.00
<b>Equity</b>		
Contributed Property-FM Value	29,031.80	29,031.80
Restricted (Scholarship Travel Fund)	656.00	1,156.00
Retained Funds	199,078.55	192,610.59
Net Income	-26,196.76	6,467.96
<b>Total Equity</b>	202,569.59	229,266.35
<b>TOTAL LIABILITIES &amp; EQUITY</b>	<b>\$202,669.59</b>	<b>\$229,266.35</b>

Statement is subject to review and approval by IOIA Board of Directors. Final copies will be available to members at the IOIA AGM and on the website.



**USDA Announces GE Regulatory Actions**

USDA's Animal and Plant Health Inspection Service (APHIS) has announced [four regulatory notices](#) and supporting scientific evaluations related to the agency's oversight of genetically engineered plants. Three notices were published in the *Federal Register* on Dec. 27, and a fourth was published on Dec. 16. APHIS has determined non-regulated status for corn genetically engineered to better withstand drought conditions, and a glyphosate-tolerant soybean that produces higher levels of oleic acid. In addition, APHIS has prepared plant pest risk assessments and draft environmental assessments to address requests from developers seeking non-regulated status for a soybean genetically engineered to produce an omega-3 fatty acid and corn genetically engineered to be resistant to the herbicide 2,4-D (a major component in Agent Orange) and aryloxyphenoxypropionate acetyl coenzyme A carboxylase inhibitors. APHIS has [posted links](#) to the related documents.

**GE Crops in the Real World - Bt Corn and Honey Bees**

One of the most frequently mentioned benefits of genetically engineered crops is a reduction in chemical pesticide use on corn and cotton. These chemicals typically kill not only pest insects but also beneficial insects that help control pests or pollinate crops. They may also harm other friendly organisms like birds.

But in reality, corn engineered to kill certain insect pests-AKA Bt corn-has mainly resulted in the replacement of one group of chemical insecticides with another. Previously, corn may have been sprayed, or soil treated with chemical insecticides to control several insect pests, especially corn rootworm. Bt has largely eliminated (at least for the time being) the demand for insecticides to control

rootworm or European corn borer.

But those who tout the benefits of GE fail to mention that today virtually all corn seed is treated instead with chemical insecticides called neonicotinoids to ward off several corn insects not well controlled by Bt toxins. And while almost all corn is now treated with insecticide via the seed, substantial amounts of corn went untreated by insecticides prior to Bt. For example, corn alternated (rotated) with soybeans from year to year usually needed little or no insecticide treatment, and only five to 10 percent of corn was sprayed for corn borers.

A new publication by several academic entomologists on the impact of neonicotinoid insecticides on honey bees shows that such seed treatment may be having serious repercussions. Previous research has linked neonicotinoids to bee deaths as a possible contributor to colony collapse disorder, which is wreaking havoc on bees across the US.

The new research is important in showing that when neonicotinoid insecticides are used as seed treatments, they can migrate through the soil or through the air in dust to other plants near (or in) corn fields, like dandelions, which honey bees prefer as a pollen source. It was already known that this type of insecticide can travel through the plant as it grows, and this study also shows corn pollen contaminated with this insecticide and substantial corn pollen use by honey bees.

Importantly, the amount of the insecticide found in and around corn fields is near the range known to kill honey bees, and dead bees collected near treated fields contained insecticide residues. It is also known that sub-lethal doses of these insecticides can disorient bees, and may make them more susceptible to pathogens and parasites.

There are a few pieces of the puzzle that still remain to be put into place, but it is looking likely that neonicotinoid seed treatments are harming U.S. honey bees.

Other research indicates that corn seed treatment is harming other types of beneficial insects. An extensive study in the U.S. Northeast on many types of beneficial beetles that are found in corn fields showed that neonicotinoid seed treatments likely harmed several of these species, although other species may fill in. This study was limited to beetles, did not include other beneficial insects, spiders and mites, and did not examine the implications for crop damage. Other research has shown that reductions in beneficial organisms can result in decreased crop yields.

In general, current data suggests that the new, ubiquitous seed treatments that have accompanied Bt corn are just as harmful as the insecticides they are replacing.

And it illustrates that the impacts of GE technology must be considered more broadly than just direct harm from an engineered gene or protein. As the authors of one of the studies wrote: "Field experimentation must consider the effects of these broader systems for realistic evaluation of currently deployed transgenic crops."

University of Illinois entomologist Mike Gray, an expert on corn rootworm, summarized the state of U.S. corn production in a recent research article: "The current lack of integration of management tactics for insect pests of maize in the U.S. Corn Belt, due primarily to the escalating use of transgenic Bt hybrids, may eventually result in resistance evolution and/or other unforeseen consequences."

*Full article by Doug Gurian-Sherman  
[Union of Concerned Scientists, January 10 2012](#)*

## Webinars, from page 6

**Multi Ingredient Processing Inspection:** This webinar will be taught by professional food scientists. It goes beyond the basic processing course and addresses the complexities of dry, liquid, cooked, refrigerated and frozen products. It will help the inspector prepare for commonly encountered problems and challenges, including food safety considerations.

### Advanced and Specialty Courses

**Organic Wine Inspection:** This webinar will include an overview of wine production, focusing on organic control points for inspection.

**Organic Aquaculture Inspection:** This webinar will include an overview of aquaculture production systems, focusing on the organic control points for inspection.

## Justice, from page 16

of the shared world, both among people and in their relations to other living beings. The principle emphasizes that those involved in organic agriculture should conduct human relationships in a manner that ensures fairness at all levels and to all parties – farmers, workers, processors, distributors, traders and consumers. Organic agriculture should provide everyone involved with a good quality of life, and contribute to food sovereignty and reduction of poverty.” AJP has translated this principle into the concrete terms of conditions on US farms and food businesses.

Farmers who have gone through the AJP process find that it gives them the push they need to make big improvements in personnel policies. In Philomath, Oregon, Gathering Together Farm owners Sally Brewer and John Eveland work with their crew of more than 100 employees to supply produce to their wholesale and retail customers, 300 community supported agriculture (CSA) members and an on-site restaurant. “Our

employees are the heart and soul of GTF,” says Eveland on why they applied for Food Justice Certification. “We are very proud of our team and want to be a great employer. Being Food Justice Certified allows us to communicate this commitment to the world.”

## Minutes, from page 17

**Audit:** Records need to be audited, per BOD Policy Manual. Treasurer and Finance Committee directed to have a decision as to what is needed to review policy and the IOIA books by February 14th BOD meeting.

## IOIA BOD Conference Call - January 9, 2012

**Attendance:** Jennie Clifford, Silke Fuchshofen, Ib Hagsten, H el ene Bouvier, Eric Feutz, Debra Bunn, Margaret Scoles – Executive Director. Acting Chair/Vice-Chair & Timekeeper: Jennie Clifford, Note taking: Margaret Scoles, H el ene Bouvier minutes, Eric Feutz financials.

**Accept Resignation from Michelle Sandy, BOD Chair, and confirm decision made Dec 29 Executive Session on BOD operations:** Eric Feutz moved to accept Michelle Sandy’s resignation. Seconded by Ib Hagsten. All in favour. Motion carried. The BOD is very appreciative of Michelle Sandy’s contributions and time dedicated to IOIA.

**ED staff bonuses (Dec 13 Executive Session), discussion staff bonus with tax:** Eric Feutz moved to approve staff bonuses with taxes covered by IOIA. Seconded by Ib Hagsten. All in favour. Motion carried.

**2012 Budget Approval:** Discussion: Tabled to February 7 meeting.

**Mischa Popoff Membership application:** Review of Membership Committee recommendation. Ib Hagsten moved to support Membership Committee recommendation. Seconded by Debra Bunn. All in favour.

**IOIA Logo:** Discussion over logo and voting results. Ib Hagsten moved to adopt #163 as IOIA’s new logo. Seconded by H el ene Bouvier. All in favour. Motion carried. Eric Feutz moved to have Al Johnson Chair the By-Laws Committee. Seconded by Ib Hagsten. All in favour. Motion carried. We gratefully appreciate all the hard work and dedication that Garry Lean brought to the Chair of the By-Laws Committee.

## IOIA BOD Conference Call - January 10

A meeting was held for discussion on the topic of inspector and reviewer accreditation/ registration/ licensing.

## Yoko Mizuno Publishes Fourth Book on Organic Agriculture in Japan

IOIA inspector Yoko Mizuno has published a fourth book on organic food and agriculture; The book’s title literally translates “*The food the organic inspector Yoko Mizuno wants to eat with her family*”. Her second and third books were geared toward grade school children. In addition, Mizuno has co-authored 2 professional books on organic agriculture. She recently received an offer to have this book translated into Chinese to be published for the readers in Taiwan, Hong Kong, Singapore, and Malaysia. We wish Yoko continued success in her endeavors!



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## SECTOR NEWS

### NOSB Report Now on NOP Site

The December 2011 edition of the NOP newsletter is now available on the NOP website, [www.ams.usda.gov](http://www.ams.usda.gov). This issue includes a summary of the Fall 2011 NOSB meeting in Savannah; International trade policies: European Union; Overview of Japan assessment; Korean market update; National List update; and NOP web content updates as well as other pertinent topics.

### New NOSB Members Announced

New NOSB members whose five-year terms began Jan. 24, 2012, are Harold V. Austin IV (Handler), Carmela Beck (Producer), Tracy Favre (Environmental), Jean Richardson (Consumer/ Public Interest), and Andrea (Zea) Sonnabend (Scientist). NOSB's new officers are Barry Flamm (Chair), Mac Stone (Vice Chair), and Wendy Fulwider (Secretary). Leaving the NOSB after completing their five-year terms are: Tracy Miedema (NOSB Chair), Steve DeMuri (Handling Committee Chair), Katrina Heinze (Materials Committee Chair) and Tina Ellor (prior Crops Committee Chair).

### NOP publishes Sunset table

The National Organic Program (NOP) has published [NOP 5611, National List Sunset Dates](#), a table of the sunset or expiration dates for all substances included on the National List of Allowed and Prohibited Substances (National List). Under the Organic Foods Production Act of 1990, the National Organic Standards Board must review all substances on the National List every five years and recommend renewing, removing, or changing each listing—a process commonly referred to as “sunset review.” Intended to provide an easy way to identify the sunset or expiration date for all substances included on the National List, NOP

5611 has been incorporated in the [NOP Program Handbook](#).

### OMRI Launches Retail Campaign

OMRI is launching a retail information campaign, with the goal of raising awareness of the OMRI seal and OMRI Listed® products within the retail sector. The OMRI Retail Subscription offers access to materials and education about products for organics. For more info go to: [www.omri.org/retail](http://www.omri.org/retail)

### Comments Sought on Proposed Rule on Synthetic Methionine

On February 6, USDA published a proposed rule that would continue the allowance of synthetic methionine in organic poultry production but at reduced levels from the current allowable levels.

The current allowance for synthetic methionine expires on October 1, 2012 and allows 4 pounds per ton of feed for laying chickens; 5 pounds per ton of feed for broiler chickens; and 6 pounds per ton of feed for turkeys and other poultry. The proposed rule would permit organic poultry producers to use synthetic methionine after October 1, 2012 at the following maximum levels: laying and broiler chickens – 2 pounds per ton of feed; turkeys and all other poultry – 3 pounds per ton of feed.

Full deliberations of the NOSB in recommending the continued use of synthetic methionine in reduced allowable quantities for organic poultry production, are available at [www.regulations.gov](http://www.regulations.gov) (search for keyword or ID AMS-NOP-11-0063; NOP-11-11PR). Additionally, comments can be submitted through [www.regulations.gov](http://www.regulations.gov) until April 6, 2012.

### Draft guidance on bulk organic products

The NOP is requesting [public comments on draft guidance](#) for accredited certifying agents and

certified operations. NOP regulations currently state that handlers of packaged organic products do not need to be certified if the products remain in the same container. The draft guidance clarifies the certification requirements for handlers of unpackaged organic bulk commodities, and specifies that handlers of unpackaged bulk organic products, such as grain, hay, milk and livestock, must be certified **OR** be covered under another operation's organic certification. Under the latter circumstance, the handler must be specifically included by direct reference in the Organic System Plan (OSP) of the certified seller or buyer of the organic products, subject to approval and inspection by the certifying agent of the certified operation. **Comments are due by April 3.**

### New NOP Training Modules

NOP recently posted several new [Training Modules](#) to its website. Examples of new training modules include a label review and exercise, adverse action notices review and exercise, review of procedures for submitting questions to NOP, and NOP's GMO policy. Additionally, NOP has added [several new documents](#) related to accreditation and certification procedures to the NOP Program Handbook.

### About the NOP Handbook

The NOP adds, edits, and removes documents from the Handbook as needed to reflect emerging issues and policy decisions. Moving forward, all changes will be listed in the Summary of Changes document by date and reflected in the Table of Contents. *NOP Organic Insider* subscribers will also be notified via email. These messages will also be archived on the NOP website. Follow this link to [Subscribe](#) to the *Organic Insider*.

### Current Handbook Edition

Revised January 27, 2012

[Introduction \(PDF\)](#)

[Summary of Changes \(PDF\)](#)

Individual Documents: [Table of Contents \(PDF\)](#)



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**Keep IOIA Strong - Lend Your Strength And Get Involved!**

## 2012 Calendar

**Feb 23 – 25** The MOSES Organic Farming Conference, La Crosse, Wisconsin. [Registration and lodging information.](#)

**Feb 28 – 29** IOIA Advanced training Chilliwack, British Columbia, Canada

**March 1** IOIA Annual General Meeting, Chilliwack, BC

**March 2-10** Ag and Natural Resources Week, East Lansing, Michigan. The event hosts more than 75 programs and annual association meetings. Events include the [Michigan Organic Reporting Session](#), a small flock poultry workshop, renewable energy seminars, and the Great Lakes Forage and Grazing Conference.  
[www.anrweek.canr.msu.edu/](http://www.anrweek.canr.msu.edu/)

**March 3** [NOFA-NH Winter Conference](#), Dover High School, Dover, New Hampshire.

**March 4-6** California Small Farm Conference, Santa Clarita. The three-day educational conference includes day-long short courses and on-farm tours, focused workshops, engaging keynote addresses, and numerous networking opportunities. This year's theme is "Cultivating the Next Generation."  
[www.californiafarmconference.com](http://www.californiafarmconference.com)

**March 7-8** HAACP for the Organic Professional, Natural Products Expo West, Anaheim, CA

**March 14** Webinar: IOIA/OMRI Livestock Inputs Webinar

**March 31 – April 6** IOIA Crop, Livestock, Advanced trainings, State College, Pennsylvania

**April 1 – 2** Natural & Organic Products Europe, Grand Hall, Olympia, London.  
[www.naturalproducts.co.uk](http://www.naturalproducts.co.uk)

**April 23-27** IOIA Basic Farm inspection training, Spanish language Tegucigalpa, Honduras

**April 25 & 26** Washington DC. OTA Policy Conference and Hill Visit Days. [www.ota.com](http://www.ota.com)

**April 30 – May 12** IOIA Crop and Livestock training, Brandon, Manitoba.

**May 16 – 19** IOIA Basic Farm training. Awajishima, Hyogo, Japan.

**May 21 – 24** NOSB Spring 2012 meeting, Hotel Albuquerque at Old Town, Albuquerque, New Mexico.

**June 18 – 21** [2nd International Organic Fruit Research Symposium: Organic Fruit 2012](#), Leavenworth, Washington.

*For a complete listing of upcoming IOIA trainings,  
please see page 3 of this issue*